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Amendments to the Claims

1. (Currently Amended) A scalable process for the highly selective, high yield separation of nucleic acids, comprising in combination: exposure ~~introduction~~, enhancement, or stabilization of structural "affinity handles" from shielded purine base sites previously present, by a process selected from the group consisting of: selective thermal denaturation and renaturation, alkaline denaturation or the use of restriction enzymes yielding single-stranded overhangs, selectively to either the desired or the undesired moieties or nucleic acid; followed by capture of the undesired (or desired) nucleic acids by techniques which are selective for the characteristics of the affinity handle wherein the product is either a nucleic acid to be purified, or a nucleic acid or a non-nucleic acid product, from which undesired nucleic acid is to be separated.

2. (Previously Presented) A process according to Claim 1 wherein the handle comprises a structural form selected from the group consisting of single stranded region of nucleic acid, Triplexes, Hairpins, Stems, Loops, Cruciforms, G quartets, and modifications to the phosphate backbone.

3. (Currently Amended) A process according to Claim 1 wherein the captured nucleic acid ~~product~~ comprises a moiety that is sensitive to host genomic DNA contamination during selective separation ~~such as single-strandedness in the undesired (or desired) nucleic acids as compared to the usual structure, such as double-strandedness, of the desired (or undesired) nucleic acids~~.

4. (Currently Amended) A process according to Claim 1 wherein the captured nucleic acid ~~product~~ comprises single-strandedness ~~in the desired product or a moeity that is~~

~~sensitive to host genomic DNA contamination selective as compared to the structure of the undesired nucleic acids~~.

5. (Currently Amended) A process according to Claim 1 [[4]] comprising manufacture of recombinant *Taq* polymerase.

6. (Currently Amended) A process according to Claim 4 wherein the exposed bases of single-stranded undesired (or desired) nucleic acids facilitate a separation step selected from the group comprising: immobilized metal affinity chromatography (IMAC), immobilized single-stranded DNA binding (SSB) protein, the use of immobilized nucleic acids (poly-dT, poly-dU, or specific sequences), and ~~the use~~ of peptide nucleic acids (PNAs).

7. (Previously Presented) A process according to Claim 1 comprising introducing single strandedness as a handle.

8. (Currently Amended) A process according to Claim 1 occurring after ~~another~~ a thermally based process ~~(such as heat-based microbial lysis),~~ in which a nucleic acid contaminant ~~(such as genomic DNA)~~ is rapidly cooled to below 65°C and is captured by an affinity method.

9. [Currently Amended) A process according to Claim 1 performed after ~~another~~ an alkali based process ~~(such as alkaline lysis),~~ in which genomic DNA or other nucleic acid contaminant [[)]] is rapidly neutralized and is captured by an affinity method.

10. (Currently Amended) A process according to Claim 1 comprising a step for introducing handles selected from the group comprising: selective thermal denaturation and renaturation, alkaline denaturation, the use of chaotropic agents, the use of restriction enzymes yielding single-stranded overhangs, ~~the use of oligonucleotide dTs, single-stranded DNA binding proteins, minerals,~~ and the use of oligonucleotide dTs, single-stranded DNA binding proteins, minerals, primers or other nucleic acid fragments ~~such as complementary DNA nucleic acids~~ to facilitate capture and separation of the undesired (or desired) nucleic acid from the desired (or undesired) nucleic acids.

11. (Previously Presented) A process according to Claim 1 wherein other plasmid isoforms selected from the group consisting of open circular ("nicked") and linear are selectively removed from the desired supercoiled plasmid DNA.

12. (Previously Presented) A process according to Claim 9 wherein other plasmid isoforms selected from the group consisting of open circular and linear are selectively removed from supercoiled plasmid DNA.

14. (Previously Presented) A process according to Claim 1 in which the separation is achieved by adsorption on chelated metal.

15. (Previously Presented) A process according to Claim 1 in which the separation is achieved using multi-channel plates.

16. (Previously Presented) A process according to Claim 1 in which the separation is achieved using IMAC ~~spin-columns~~.

17. (Previously Presented) A process according to Claim 1 in which the separation is achieved using magnetic particles.

18. (Previously Presented) A process according to Claim 1 in which the separation of multiple samples is achieved in parallel fashion.

19. (Currently Amended) A process according to Claim 1 in which the captured nucleic acid ~~product~~ comprises a moiety selected from BACs, PACs and YACs ~~protein~~.

20. (Currently Amended) A process according to Claim 1 in which the ~~desired~~ captured nucleic acid ~~product~~ is a plasmid.

21. (Currently Amended) A process according to Claim 1 in which the ~~desired~~ captured nucleic acid ~~product~~ is genomic DNA.

22. (Currently Amended) A process according to Claim 1 in which the ~~desired~~ captured nucleic acid ~~product~~ is RNA.

23. (Currently Amended) A process according to Claim 1 in which the capture method comprises ~~is~~ HIC.

24. (Currently Amended) A process according to Claim 1 in which the capture method comprises ~~is~~ RPC.

25. Cancelled